

FY2005

Soldier Systems Center

Installation Action Plan



FY 2005

**Soldier Systems
Center**

Massachusetts

Installation Action Plan

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Acronyms & Abbreviations

| | |
|------------------|---|
| ALF | Abandoned Landfill |
| ADRA | Ammunition Demilitarization and Renovation Area |
| AEDB-R | Army Environmental Database - Restoration (formerly DSERTS) |
| ATCOM | Aviation and Troop Command |
| BRAC | Base Realignment and Closure Action |
| CBDCOM | Chemical and Biological Defense Command |
| CERCLA | Comprehensive Environmental Response Compensation and Liability Act |
| DERA | Defense Environmental Restoration Account |
| DRMO | Defense Reutilization and Marketing Office |
| DSERTS | Defense Site Environmental Restoration Tracking System (now AEDB-R) |
| ER,A | Environmental Restoration, Army (formerly called DERA) |
| EPA | U.S. Environmental Protection Agency |
| FFSRA | Federal Facility Site Remediation Agreement |
| FS | Feasibility Study |
| FY | Fiscal Year |
| GAC | Granular Activated Carbon |
| GOCO | Government Owned Contractor Operated |
| GOGO | Government Owned Government Operated |
| HRS | Hazardous Ranking Score |
| IRA | Interim Remedial Action |
| IRP | Installation Restoration Program |
| MADEP | Massachusetts Department of Environmental Protection (MDEP) |
| MCL | Maximum Contaminant Level |
| NCTRF | Navy Clothing and Textile Research Facility |
| NE | Not Evaluated |
| NFA | No Further Action |
| NR | Not Rated |
| NPL | National Priorities List |
| NRDEC | Natick Research, Development and Engineering Center |
| OB/OD | Open Burning/Open Detonation |
| P & E | Propellant and Explosive |
| PM-SSPT | Project Manager-Soldier Support |
| POL | Petroleum, Oil & Lubricants |
| PRP | Potentially Responsible Party |
| RA | Remedial Action |
| RA(C) | Remedial Action (Construction) |
| RA(O) | Remedial Action (Operation) |
| RAB | Restoration Advisory Board |
| RCRA | Resource Conservation and Recovery Act |
| RD | Remedial Design |
| REM | Removal |
| RI | Remedial Investigation |
| RIP | Remedy in Place |
| ROD | Record of Decision |
| RRSE | Relative Risk Site Evaluation |
| SI | Site Inspection |
| SBCCOM | Soldier and Biological Chemical Command |

Acronyms & Abbreviations

| | |
|-----------------|--|
| SSC | Soldier Systems Center |
| SSCOM | Soldier Systems Command |
| STP | Sewage Treatment Plant |
| SVOC | Semi-Volatile Organic Compounds |
| TCE | Trichloroethylene |
| TNT | Trinitrotoluene |
| TPH | Total Petroleum Hydrocarbons |
| TROSCOM | Troop Support Command |
| Ug/g | microgram per gallon |
| Ug/l | microgram per liter |
| USACHPPM | United States Army Center for Health Promotion and Preventive Medicine |
| USACE | United States Army Corps of Engineers |
| USAEC | United States Army Environmental Center |
| USAEHA | United States Army Environmental Hygiene Agency (now USACHPPM) |
| USARIEM | United States Army Research Institute of Environmental Medicine |
| USATHMA | United States Army Toxic and Hazardous Material Agency (now USAEC) |
| UST | Underground Storage Tank |
| UXO | Unexploded Ordnance |
| VOC | Volatile Organic Compounds |
| Zone 2 | Area of contribution to a municipal water system that has 6 months of pumping with no recharge |

Statement of Purpose

The purpose of the Installation Action Plan (IAP) is to outline the total multi-year restoration program for an installation. The plan will define Installation Restoration Program (IRP) requirements and propose a comprehensive approach and associated costs to conduct future investigations and remedial actions at each Solid Waste Management Unit (SWMU) at the installation and other areas of concern.

In an effort to coordinate planning information between the IRP manager, major army commands (MACOMs), installations, executing agencies, regulatory agencies, and the public, an IAP has been completed for the Soldier Systems Center. The IAP is used to track requirements, schedules and tentative budgets for all major Army installation restoration programs.

All site specific funding and schedule information has been prepared according to projected overall Army funding levels and is therefore subject to change during the document's annual review. Under current project funding, all remedies will be in place at the Soldier Systems Center by the end of 2009.

The following agencies contributed to the formulation and completion of this Installation Action Plan:

Engineering & Environment, Inc. for USAEC

MA Department Environmental Protection

Soldier Systems Center

US Army Environmental Center

US Environmental Protection Agency

| | | | |
|--|---|--|--|
| STATUS: | National Priorities Listed (May 1994) HSR2 Score: 50 Groundwater Contamination with suspected off-post contamination | | |
| NUMBER OF AEDB-R SITES: | 16 AEDB-R Sites: 12 Active 4 Response Complete | | |
| DIFFERENT AEDB-R SITE TYPES: | 1 Incinerator 1 UST 1 Contaminated Fill 1 POL Line 1 Other 2 Contaminated Sediments | 1 Contaminated Building 2 Storage Areas 2 Contaminated Groundwater 1 Spill Site Area 1 Building Demolition/Debris 1 Disposal Pit/Dry Well | |
| CONTAMINANTS OF CONCERN: | POL, Pesticides, Chlorinated Solvents, Polychlorinated Biphenyls | | |
| MEDIA OF CONCERN: | Groundwater, Soil, Structures/internal surface, Air and Interior Building Surfaces | | |
| COMPLETED REM/IRA/RA: | -Pit Area Waste Oil Tank, Tank and Soil Removed, 1991 -Tanks Liquid Nitrogen, Removed, May 1993 -Building 30 Incinerator, Ash Removal, Oct. 93-Feb. 94 -Chlordane Contamination, Soil Removal, FY96-FY97 -Boiler Plant Soil removal FY01 -Gym Site Soil removal FY02 | | |
| CURRENT IRP PHASES: | SI: 1 site RA(O): 1 site | RI/FS: 5 sites RD: 1 site | IRA: 3 sites |
| PROJECTED IRP PHASES: | SI: 1 site RA: 5 sites | RI/FS: 3 sites RA(O): 3 sites | IRA: 1 site RD: 4 sites LTM: 3 sites |
| IDENTIFIED POSSIBLE REM/IRA/RA: | -NRDEC-03: Clean building interior -NRDEC-07, 10, 17: Removal of sediment -NRDEC-06, 12, 13: Soil removal -NRDEC-11, In situ treatment -NRDEC-16, Groundwater treatment | | |
| DURATION: | Year of IRP Inception | 1980 | |
| | Year of RIP | 2009 | |
| | Year of IRP Completion | 2029 | |

Installation Information

SITE DESCRIPTION: Soldier Systems Center is located on a peninsula on the eastern shores of Lake Cochituate in the Town of Natick, Massachusetts, approximately 20 miles west of Boston. The surface of the lake is 138 feet above mean sea level. The town of Natick is a suburban area typified by light industry, with a population of 30,000.

COMMAND ORGANIZATION: Northeast Region Installation Management Agency (IMA)

IRP EXECUTING AGENCIES: Investigation Phase Executing Agency: Soldier Systems Center
Remedial Design/Action Phase Executing Agency: Soldier Systems Center and Army Corps of Engineers, New England Division

REGULATORY PARTICIPATION: **Federal:** U.S. Environmental Protection Agency, New England
State: Massachusetts Department of Environmental Protection (MDEP)

REGULATORY STATUS:

- National Priorities Listed (NPL)(May 1994), Groundwater Contamination with off-post contamination
- Notice of Responsibility (for TCE and PCE), MDEP, August 1991

MAJOR CHANGES TO IAP FROM PREVIOUS YEAR:

- Completed Boiler Plant soil removal action
- Completed Gym Site soil removal action
- Used innovative technology (diffusion sampling) at Buildings 22/36 for the remedial investigation.

Installation Description

DESCRIPTION

Since 1983, Natick Laboratory was one of two facilities (along with the U.S. Army Belvoir Research Development, and Engineering Center) under the U.S. Army Troop Support Command (TROSCOM). During 1992, Natick Laboratory was consolidated under U.S. Army Aviation and Troop Command (ATCOM). In 1994, the Soldier Systems Command (SSCOM) was established. In 1998, The SSCOM merged with the Chemical and Biological Defense Command (CBDCOM) to form the Soldier and Biological Chemical Command (SBCCOM). The Natick Site (Soldier Systems Center) currently includes Headquarters and Headquarters Detachment, the Soldier Systems Center, the Integrated Materiel Management Center (IMMC), as well as Project Manager-Soldier Support (PM-SSPT). The command also has elements of the Project Manager-Soldier (PM-Soldier). The current mission of the Soldier Systems Center (SSC) at Natick is to develop, integrate, acquire, and sustain soldier and related support systems to modernize, balance, and improve the soldier's warfighting capabilities, performance, and quality of life.

Natick R, D, and E Center was officially established in 1953 as the Quartermaster Research and Development Center, a major U.S. Army laboratory whose primary mission was the research and development of food, clothing, and personal and organizational equipment vital to the support of the individual combat soldier. Prior to that time, particularly during World Wars I and II, research had been scattered at different facilities across the country under the Quartermaster Command.

Most of the 78-acre site on Lake Cochituate was donated by the Town of Natick. The site was selected in part for its proximity to Boston, 20 miles away, and for its abundant and inexpensive water supply. Construction began in November 1952, and the facility, consisting of 10 reinforced concrete buildings, began operation in the summer of 1954.

The laboratory complex buildings, completed in 1954 and 1955, included five major research and administrative buildings: the Administration Building (Building 1, also known as Headquarters Building); the Climatic Chambers (Building 2); the Research Building (Building 3); the Development Building (Building 4); and the Technology Engineering Building (Building 5). Among the support buildings constructed were a boiler house (Building 19); an enlisted men's barracks (expanded in 1978-1979); the Hazardous Research Building, now a research and development building (Building 8); and the Laboratory Test Building (Building 7).

Major additions to the original facility have included the Engineering Building (1964, Building 36), the Environmental Medicine Building, and the Navy Research Facility (1990). The Natick Center carries out research development, testing and engineering in food and food service systems, shelters, clothing systems, airdrop systems, and field service equipment to sustain and support combat soldiers. Activities are housed in four prime directorates: Combat Feeding Directorate, Individual Protection Directorate, Airdrop/Aerial Delivery Directorate and Supporting Science Directorate. Responsibilities also include the development of specifications and standards for products and commodities with military applications.

In addition to the facilities mentioned above, the laboratory also includes the Navy Clothing and Textile Research Facility (NCTRF). The NCTRF presently has a laboratory facility in Building 7, with Headquarters in Building 86. Established in 1967, the facility conducts research, design, and development of all protective clothing, dress uniforms, and utility garments worn by most Navy and Coast Guard personnel. The Coast Guard, Bureau of Engraving and Printing, General Services Administration, and the U.S. Army Research Institute of Environmental Medicine (USARIEM) are additional tenant agencies located on the post.

Contamination Assessment

A HRS score of 28.5 or higher dictates inclusion on the National Priorities List (NPL). The EPA proposed Natick (NRDEC) for inclusion on the NPL after NRDEC scored 50 using HRS II, soliciting comments in the Federal Register. The Army sent comments to the proposed listing explaining why NRDEC should not be listed, but in the 31 May 1994 issue of the Federal Register, the EPA officially included Natick (NRDEC) on the National Priorities List (NPL). NRDEC was placed on the NPL because of the groundwater contamination (TCE) in the T-25 Area (NRDEC-05). The contamination has moved off-site. NRDEC currently shows levels of TCE, above MCL, in off-post groundwater. A pump and treat system was installed in 1998 to control the movement and to clean the TCE plume.

Sediment contaminated with PCBs, pesticides, and PAHs has been identified in Lake Cochituate at three locations. This contamination is being investigated under NRDEC-07, 10, and 17.

The installation lies within “zone two” of Natick’s municipal drinking water supply system, which has the effect of limiting the options available for remediating contaminated groundwater.

Previous Studies

| ID | Title | Date |
|----|--|-----------|
| 1 | Analysis of Existing Facilities/Environmental Assessment Report, U.S. Army Natick Research and Development Command, Natick, Massachusetts | 11/1/1978 |
| 2 | Installation Assessment of U.S. Army Natick Research and Development Command, Report # 170 | 5/1/1980 |
| 3 | Phase II Petrix Gas Survey conducted at U.S. Army Natick Research, Development and Engineering Center (NRDEC) | 4/1/1990 |
| 4 | Final Report Master Environmental Plan for the U.S. Army Natick Research, Development and Engineering Center (NRDEC) | 1/1/1993 |
| 5 | Interim Remedial Action Study, Remedial Investigation/Feasibility Study (RI/FS) for T-25 Area at the U.S. Army Natick Research, Development, and Engineering Center (NRDEC), Natick, Massachusetts | 3/23/1993 |
| 6 | EPA Final Hazard Ranking System (HRS), U.S. Army Natick Research, Development and Engineering Center (NRDEC) | 5/10/1993 |
| 7 | Draft Report, Assessment of Location-Specific Applicable or Relevant and Appropriate Requirements (ARARS) for the U.S. Army Natick Research, Development and Engineering Center (NRDEC), Natick, Massachusetts | 6/15/1993 |
| 8 | Draft Feasibility Study Report, T-25 Area at the U.S. Army Natick Research, Development and Engineering Center (NRDEC), Natick, Massachusetts | 7/1/1994 |
| 9 | Agency for Toxic Substances and Disease Registry, Department of Health and Human Services, Public Health Service Site Visit Summary for the U.S. Army Natick Research, Development and Engineering Center (NRDEC), Natick, Massachusetts | 9/1/1994 |
| 10 | Draft Remedial Investigation (RI) Addendum T-25 Area and Water Supply Wells at the U.S. Army Natick Research, Development and Engineering Center (NRDEC) | 9/1/1994 |
| 11 | Draft Geophysical Investigation, Natick Research and Development Engineering Center (NRDEC), Natick, Massachusetts | 1/1/1995 |
| 12 | Prepare Ground Water Model for Natick Research and Development and Engineering Center (NRDEC), Draft Technical Plan | 3/10/1995 |
| 13 | Draft Work Plan Remedial Investigation/Feasibility Study (RI/FS) and Interim Remedial Alternatives (IRA) Study and Design for the T-25 Area at the U.S. Army Natick Research, Development and Engineering Center (NRDEC) | 3/1/1995 |
| 14 | Draft Stepped Rate Aquifer Test Design, T-25 Area at the U.S. Army Soldier Systems Command (SSCOM), Natick, Massachusetts | 3/1/1996 |
| 15 | Final Health and Safety Plan, Remedial Investigation/Feasibility Study (RI/FS) for T-25 Area at U.S. Army Natick Research, Development and Engineering Center (NRDEC), Natick, Massachusetts | 6/1/1996 |
| 16 | Final Work Plan - Phase II Remedial Investigation (RI) for T-25 Area at the U.S. Army Soldier Systems Command (SSCOM) Natick, Massachusetts | 6/1/1996 |
| 17 | Final Quality Assurance Project Plan - Phase II Remedial Investigation (RI) for T-25 Area at the U.S. Army Soldier Systems Command (SSCOM) Natick, Massachusetts - Volume I of II | 6/1/1996 |
| 18 | Final Quality Assurance Project Plan - Phase II Remedial Investigation (RI) for T-25 Area at the U.S. Army Soldier Systems Command (SSCOM) Natick, Massachusetts - Volume II of II | 6/1/1996 |
| 19 | Final Quality Assurance Project Plan Remedial Investigation/Feasibility Study (RI/FS) and Interim Remedial Alternatives (IRA) Study and Design for T-25 Area at the U.S. Army Natick Research, Development and Engineering Center (NRDEC), Natick, Massachusetts | 7/1/1996 |
| 20 | Draft Final Community Relations Plan - U.S. Army Soldier Systems Command (SSCOM) Natick, Massachusetts | 7/1/1996 |

Previous Studies

| ID | Title | Date |
|----|---|-----------|
| 21 | Draft Final Letter Report Survey of Local Properties - Remedial Investigation/Feasibility Study (RI/FS) for T-25 Area at the U.S. Army Natick Research, Development and Engineering Center (NRDEC), Natick, Massachusetts | 7/1/1996 |
| 22 | Phase I Final Work Plan - Remedial Investigation/Feasibility Study (RI/FS) and Interim Remedial Alternatives (IRA) Study and Design for T-25 Area at the U.S. Army Natick Research, Development and Engineering Center (NRDEC), Natick Massachusetts | 8/1/1996 |
| 23 | Final Phase I Remedial Investigation (RI) Report Volume I of III Sections 1.0 through 8.0 - T-25 Area at the U.S. Army Natick Research, Development and Engineering Center (NRDEC), Natick, Massachusetts | 8/1/1996 |
| 24 | Final Phase I Remedial Investigation (RI) Report Volume II of III Appendices - T-25 Area at the U.S. Army Natick Research, Development and Engineering Center (NRDEC), Natick, Massachusetts | 8/1/1996 |
| 25 | Final Phase I Remedial Investigation (RI) Report Volume III of III Appendices - T-25 Area at the U.S. Army Natick Research, Development and Engineering Center (NRDEC), Natick, Massachusetts | 8/1/1996 |
| 26 | Draft Final Quarterly Ground Water Monitoring Report (Summer and Fall 1995) - T-25 Area, Water Supply Well Area, and Former Proposed Gymnasium Area at the U.S. Army Soldier Systems Command (SSCOM) Natick, Massachusetts | 8/1/1996 |
| 27 | DRAFT Action Memorandum Storage Area, U.S. Army Soldier Systems Command (SSCOM) Natick, Massachusetts, Revision 1 | 11/1/1996 |
| 28 | Draft Quarterly Ground Water Monitoring Report (Winter 1996 and Spring 1996) - T-25 Area, Water Supply Well Area, and Former Proposed Gymnasium Area, and Boiler Plant Area at the U.S. Army Soldier Systems Command (SSCOM), Natick, Massachusetts | 12/1/1996 |
| 29 | Phase II Field Investigation Data, Remedial Investigation (RI) of the T-25 Area at the U.S. Army Soldier Systems Command (SSCOM), Natick, Massachusetts | 1/1/1997 |
| 30 | Draft Quality Assurance Project Plan-Addendum, Sections 1.0 - 15.0, U.S. Army Soldier Systems Command (SSCOM), Natick, Massachusetts | 5/1/1997 |
| 31 | Draft Health and Safety Plan-Addendum Former Proposed Gymnasium Site, SSCOM Water Supply Wells Remedial Investigation (RI) Data Item A003 | 5/1/1997 |
| 32 | Draft Final Work Plan, Former Proposed Gymnasium Site, SSCOM Water Supply Wells Remedial Investigation (RI) Data Item A003 | 6/1/1997 |
| 33 | Final Report Ground Water Model for Soldier Systems Command (SSCOM), Natick, Massachusetts | 6/1/1997 |
| 34 | Draft Quarterly Ground Water Monitoring Report (Summer 1996, Fall 1996 and Winter 1996\1997) - T-25 Area, Water Supply Well Area, and Former Proposed Gymnasium Area, and Boiler Plant Area at the U.S. Army Soldier Systems Command (SSCOM), Natick, Massachusetts | 6/1/1997 |
| 35 | Agency for Toxic Substance and Disease Registry Public Health Assessment for Natick Laboratory Army Research a/k/a U.S. Army Soldier Systems Command (SSCOM), Natick, Massachusetts | 7/1/1997 |
| 36 | Final Site Safety and Health Plan for Storage Area Removal Action T-25 Area, U.S. Army Soldier Systems Command (SSCOM), Natick, Massachusetts | 8/1/1997 |
| 37 | Final Removal Action Work Plan for Storage Area Removal Action T-25 Area, U.S. Army Soldier Systems Command (SSCOM), Natick, Massachusetts | 8/1/1997 |

Previous Studies

| ID | Title | Date |
|----|--|------------|
| 38 | Final Treatability Study Work Plan - T-25 Area at the U.S. Army Soldier Systems Command (SSCOM), Natick, Massachusetts | 10/15/1997 |
| 39 | Final Work Plan Former Proposed Gymnasium Site, Soldier Systems Command (SSCOM) Water Supply Wells Remedial Investigation (RI) Data Item A003 | 12/1/1997 |
| 40 | Draft Final Quarterly Groundwater Sampling Report Event 14 (July 1997) at the U.S. Army Soldier Systems Command (SSCOM), Natick, Massachusetts | 3/1/1998 |
| 41 | Public Health Assessment for the U.S. Army Soldier Systems Command (SSCOM), Natick, Massachusetts | 3/1/1998 |
| 42 | Health Consultation for the U.S. Army Soldier Systems Command (SSCOM), Natick, Massachusetts | 3/1/1998 |
| 43 | Draft Technical Work Plan, Groundwater Modeling at the U.S. Army Soldier Systems Command (SSCOM), Natick, Massachusetts | 4/1/1998 |
| 44 | Draft Final Quarterly Groundwater Sampling Report Event 15 (January 1997) at the U.S. Army Soldier Systems Command (SSCOM), Natick, Massachusetts | 6/1/1998 |
| 45 | Draft Work Plan for Site Investigation for Boiler Plant, Former Hazardous Materials Storage Building, Former Piggery, and Building T-23, U.S. Army Environmental Center, Aberdeen Proving Grounds, Maryland | 6/1/1998 |
| 46 | Storm Water Sampling Report, Contract No. DAAK60-97-P-4847, prepared for Soldier Systems Command (SSCOM) | 8/1/1998 |
| 47 | Draft Final Work Plan for Site Investigation for Boiler Plant, Former Hazardous Materials Storage Building, Former Piggery, and Building T-23, U.S. Army Soldier Systems Command (SSCOM), Natick, Massachusetts | 9/1/1998 |
| 48 | Draft Final Quarterly Groundwater Sampling Report Event 16 (April 1998) at the U.S. Army Soldier Systems Center (SSC), Natick, Massachusetts | 10/1/1998 |
| 49 | Tier II Ecological Risk Assessment Work Plan, T-25 Area at the U.S. Army Soldier Systems Center (SSC), Natick, Massachusetts | 11/1/1998 |
| 50 | Draft Addendum to Quality Assurance Project Plan, Tier II Ecological Risk Assessment and Treatability Study Operation and Maintenance for T-25 Area at the U.S. Army Soldier Systems Center (SSC), Natick, Massachusetts | 11/1/1998 |
| 51 | Final Phase II Remedial Investigation (RI) Report Volume I sections 1.0 through 4.0 - T-25 Area at the U.S. Army Soldier Systems Command (SSCOM), Natick, Massachusetts | 12/1/1998 |
| 52 | Final Phase II Remedial Investigation (RI) Report Volume II sections 5.0 through 9.0 - T-25 Area at the U.S. Army Soldier Systems Command (SSCOM), Natick, Massachusetts | 12/1/1998 |
| 53 | Draft Remedial Investigation Report (RI), Former Proposed Gymnasium Site, Data Item A013, Volume I of II-Text, Figures And Tables | 1/1/1999 |
| 54 | Draft Remedial Investigation Report (RI), Former Proposed Gymnasium Site, Data Item A013, Volume II of II-Appendices A through V | 1/1/1999 |
| 55 | Final Removal Action Report, Storage Area Removal Action T-25 Area at the U.S. Army Soldier Systems Command (SSCOM), Natick, Massachusetts | 2/1/1999 |
| 56 | Draft Final Quarterly Groundwater Sampling Report Event 17 (August 1998) U.S. Army Soldier Systems Center (SSC), Natick, Massachusetts | 2/1/1999 |
| 57 | Draft Remedial Investigation (RI) Report Soldier Systems Center (SSC) Water Supply Wells Site, Volume I of II: Text, Tables & Figures | 3/1/1999 |
| 58 | Draft Remedial Investigation (RI) Report Soldier Systems Center (SSC) Water Supply Wells Site, Volume II of II: Appendices A through R | 3/1/1999 |
| 59 | Draft Final Quarterly Groundwater Sampling Report Event 18 (December 1998) U.S. Army Soldier Systems Center (SSC), Natick, Massachusetts | 5/1/1999 |

Previous Studies

| ID | Title | Date |
|----|---|-----------|
| 60 | Draft Final Quarterly Groundwater Sampling Report Event 19 (March 1999) U.S. Army Soldier Systems Center (SSC), Natick, Massachusetts | 6/1/1999 |
| 61 | Final Focused Feasibility Study/Treatability Study, T-25 Area at the U.S. Army Soldier Systems Center (SSC), Natick, Massachusetts | 9/1/1999 |
| 62 | Transcript of Public Hearing, Re: U.S. Army Soldier Systems Center (SSC), Natick, Massachusetts Proposed Plan to Clean Up Groundwater at the T-25 Area | 9/23/1999 |
| 63 | Tier II Ecological Risk Assessment Work Plan, Main Storm water Outfall (MSO) Area, U.S. Army Soldier Systems Center (SSC), Natick, Massachusetts | 10/1/1999 |
| 64 | Draft Final Quarterly Groundwater Sampling Report Event 20 (July 1999) U.S. Army Soldier Systems Center (SSC), Natick, Massachusetts | 2/1/2000 |
| 65 | Draft Storm water Sampling Report; U.S. Army Soldier Systems Center (SSC), Natick, Massachusetts | 3/1/2000 |
| 66 | Working Draft, Interim Technical Memorandum, T-25 Area Storm water Outfall, Tier II Ecological Risk Assessment, U.S. Army Soldier Systems Center (SSC) | 4/1/2000 |
| 67 | Draft Preliminary Phase II Site Investigation Report, Boiler Plant Site, Soldier Systems Center (SSC), Natick, Massachusetts, Data Item A003 | 5/1/2000 |
| 68 | Draft, Quarterly Groundwater Monitoring Report Event 21 (October 1999), Soldier Systems Center (SSC), Natick, Massachusetts | 6/1/2000 |
| 69 | Draft, T-25 Area Tier II Ecological Risk Assessment Report for the U.S. Army Soldier Systems Center (SSC), Natick, Massachusetts | 6/1/2000 |
| 70 | Draft Technical Memorandum, Building 22, Soldier Systems Center (SSC), Natick, Massachusetts | 9/1/2000 |
| 71 | Draft Work Plan, Building 22 Remedial Investigation (RI), Soldier Systems Center (SSC), Natick, Massachusetts | 9/1/2000 |
| 72 | Water Resources Investigation Report, Pond-Aquifer Interaction at South Pond of Lake Cochituate, Natick, Massachusetts, prepared in cooperation with the U.S. Environmental Protection Agency (USEPA) and the U.S. Army | 1/1/2001 |
| 73 | Draft Final, Revised Quality Assurance Project Plan, Soldier Systems Center (SSC), Natick, Massachusetts, Volume I Sections 1.0-14.0 and Appendices A through G | 1/1/2001 |
| 74 | Draft, Final Revised Quality Assurance Project Plan, Soldier Systems Center (SSC), Natick, Massachusetts, Volume II Appendix H Laboratory Quality Assurance Plan and Operating Procedures (Severn Trent Laboratory, Sparks, Maryland) | 1/1/2001 |
| 75 | Draft, Final Revised Quality Assurance Project Plan, Soldier Systems Center (SSC), Natick, Massachusetts, Volume III Appendix I Laboratory Quality Assurance Plan and Standard Operating Procedures (Datachem Laboratory, Salt Lake City, Utah) | 1/1/2001 |
| 76 | Draft Final, Quarterly Groundwater Monitoring Report Event 26 (June 2001), Soldier Systems Center (SSC), Natick, Massachusetts | 2/1/2001 |
| 77 | Draft Final Quarterly Groundwater Monitoring Report, Event 22 (January 2000) U.S. Army Soldier Systems Center (SSC), Natick, Massachusetts | 3/1/2001 |
| 78 | Draft Final Quarterly Groundwater Monitoring Report, Event 23 (May 2000), Soldier Systems Center (SSC), Natick, Massachusetts | 3/1/2001 |
| 79 | Record of Decision, T-25 Area Ground Water (Operable Unit 1), U.S. Army Soldier Systems Center (SSC), Natick, Massachusetts | 4/1/2001 |
| 80 | Draft Report Groundwater Flow and Transport Modeling Results for the T-25 Area at Soldier Systems Center (SSC), Natick, Massachusetts | 6/7/2001 |

Previous Studies

| ID | Title | Date |
|-----|--|-----------|
| 81 | Draft Tier III Ecological Risk Assessment Work Plan, U.S. Army Soldier Systems Center (SSC), Natick, Massachusetts | 8/1/2001 |
| 82 | Draft Quality Assurance Project Plan Addendum, Tier III Ecological Risk Assessment, U.S. Army Soldier Systems Center (SSC), Natick, Massachusetts | 8/1/2001 |
| 83 | Draft Letter Report Historic Outfalls, U.S. Army Soldier Systems Center (SSC), Natick, Massachusetts | 8/1/2001 |
| 84 | Draft Main Storm Water Outfall (MSO) Tier II Ecological Risk Assessment Report for the U.S. Army Soldier Systems Center (SSC), Natick, Massachusetts | 8/1/2001 |
| 85 | Draft Feasibility Study (FS) Report, Former Proposed Gymnasium Site | 8/1/2001 |
| 86 | Draft Final Remedial Investigation (RI) Report, Soldier Systems Center (SSC) Water Supply Wells Site, Volume I of II - Text, Figures and Tables | 8/1/2001 |
| 87 | Draft Final Remedial Investigation (RI) Report, Soldier Systems Center (SSC) Water Supply Wells Site, Volume II of II - Appendices A through R | 8/1/2001 |
| 88 | Final Work Plan, Buildings 22 and 36 Remedial Investigation (RI), Soldier Systems Center (SSC), Natick, Massachusetts | 8/1/2001 |
| 89 | Final Revised Quality Assurance Project Plan, U.S. Army Soldier Systems Center (SSC), Natick, Massachusetts, Volume I, Sections 1.0-14.0 and Appendices A through G | 8/1/2001 |
| 90 | Draft Quarterly Groundwater Monitoring Report, Event 24 (October 2000), Soldier Systems Center (SSC) | 8/1/2001 |
| 91 | Draft Final Quarterly Groundwater Monitoring Report, Event 24 (October 2000), Soldier Systems Center (SSC) | 9/1/2001 |
| 92 | NPDES Permit Exclusion - Chemical Data, July 1, 2001 to September 30, 2001, U.S. Army Soldier Systems Center (SSC), Natick, Massachusetts | 10/1/2001 |
| 93 | Draft Storm Water Sampling Report, U.S. Army Soldier Systems Center (SSC), Natick, Massachusetts | 10/1/2001 |
| 94 | Final, T-25 Area Tier II Ecological Risk Assessment Report, U.S. Army Soldier Systems Center (SSC), Natick, Massachusetts | 12/1/2001 |
| 95 | Final Report, Development and Application of a Calibrated Ground Water Flow and Transport Model for the T-25 Area at Soldier Systems Center (SSC), Natick, Massachusetts | 2/3/2002 |
| 96 | Draft Final, Quarterly Groundwater Monitoring Report, Event 25 (March 2001), Soldier Systems Center (SSC), Natick, Massachusetts | 2/1/2002 |
| 97 | Draft Revised Risk Assessment Approach Technical Memorandum, Soldier Systems Center (SSC), Natick, Massachusetts | 6/1/2002 |
| 98 | Draft Final Quarterly Groundwater Monitoring Report, Event 27 (August 2001), Soldier Systems Center (SSC), Natick, Massachusetts | 6/1/2002 |
| 99 | Letter Report titled Natick Tier III Fish Data - Human Health Screening Comparisons prepared by ICF Consulting, Inc., 18 July 2002 | 7/18/2002 |
| 100 | Interim Technical Memorandum, Tier III Ecological Risk Assessment, U.S. Army Soldier Systems Center (SSC) | 7/1/2002 |
| 101 | Final Draft, Storm water Sampling Report 2001 Sampling Event, U.S. Army Soldier Systems Center (SSC), Natick, Massachusetts August 2002 | 8/1/2002 |
| 102 | Final Tier III Ecological Risk Assessment Work Plan, U.S. Army Soldier Systems Center (SSC), Natick, Massachusetts August 2002 | 8/1/2002 |
| 103 | Final Quality Assurance Project Plan Addendum, Tier III Ecological Risk Assessment, U.S. Army Soldier Systems Center (SSC), Natick, Massachusetts August 2002 | 8/1/2002 |

Previous Studies

| ID | Title | Date |
|-----|--|-----------|
| 104 | Final Letter Report, Historic Outfalls, U.S. Army Soldier Systems Center (SSC), Natick, Massachusetts August 2002 | 8/1/2002 |
| 105 | Final Main Stormwater Outfall (MSO), Tier II Ecological Risk Assessment Report for the U.S. Army Soldier Systems Center (SSC), Natick, Massachusetts August 2002 | 8/1/2002 |
| 106 | Draft, Quality Assurance Project Plan Addendum - Building 14 and Former Building 13 Site Investigation/Remedial Investigation and Feasibility Study, U.S. Army Soldier Systems Command (SSC), Natick, Massachusetts September 2002 | 9/1/2002 |
| 107 | Draft Work Plan, Building 14 and Former Building 13 Site Investigation/Remedial Investigation and Feasibility Study | 9/1/2002 |
| 108 | Draft Remedial Investigation Report, Buildings 22 and 36, Soldier Systems Center (SSC), Natick, Massachusetts, Volume I of II, Text, Figures, and Tables November 2002 | 11/1/2002 |
| 109 | Draft Remedial Investigation Report, Buildings 22 and 36, Soldier Systems Center (SSC), Natick, Massachusetts, Volume II of II, Appendices A through R November 2002 | 11/1/2002 |
| 110 | Final, Stormwater Sampling Report - 2001 Sampling Event, U.S. Army Soldier Systems Center (SSC), Natick, Massachusetts | 11/1/2002 |
| 111 | Draft Final, Quarterly Groundwater Monitoring Report, Event 29 (March 2002), Soldier Systems Center (SSC), Natick, Massachusetts December 2002 | 12/1/2002 |
| 112 | Augmentation of the Ground-Water Monitoring Well Network in the Vicinity of the T-25 Area, U.S. Army Soldier Systems Center (SSC), Natick, Massachusetts | 1/1/2003 |

FY 2005

Soldier Systems Center

Massachusetts

ER, A ELIGIBLE SITES

NRDEC-03

T62, T68 LAB PACK WASTE STORAGE

SITE DESCRIPTION

Both T-62 and T-68 are identical small sheds located on the north-western end of a concrete loading platform of Building 20. The sheds were built in 1974/5 and 1980/1 respectively. They are constructed with corrugated metal walls and roof and have concrete floors. No berm is present. Each building has windows on two sides.

Both buildings were used for hazardous waste and chemical storage until a new hazardous waste storage area opened in Building 85. Incoming chemicals were reportedly stored and dispensed from a location next to Building T-62, and chemicals no longer needed on-site were stored in Building T-62 before being removed for off-site disposal. Currently these buildings are being used for storage of installation restoration program equipment.

Soil samples outside of the building (as part of NRDEC-13) have detects of PAHs.

NRDEC-13 will be closed in AEDB-R and incorporated into NRDEC-03. RI/FS was awarded in late FY03. Wall chip, floor, and below-slab soil samples were taken in January 2004.

STATUS

RRSE RATING:

Medium

CONTAMINANTS:

Pesticides, Solvents, PAHs

MEDIA OF CONCERN:

Interior Building Surfaces, Soil

COMPLETED IRP PHASE:

PA

CURRENT IRP PHASE:

RI/FS (funded)

FUTURE IRP PHASE:

IRA

PROPOSED PLAN

Investigative efforts will be conducted with NRDEC-13. Limited cleaning of the building surfaces, to prevent future release, and soil removal is expected to be needed. This site will be consolidated with several other sites (NRDEC-06, 03, 13, 14) for a no further action ROD.

NRDEC-04

PIT AREA WASTE OIL STORAGE TANK

SITE DESCRIPTION

A 1,000 gallon underground storage tank was located about 25 feet east of the tennis court in the T-25 Area. The tank, which was used to store waste oil, was coated with asphalt to protect the exterior from corrosion prior to installation around 1973. The tank and associated piping were of single-wall steel construction.

The oil in the tank was suspected to be contaminated with mercury compounds. Accordingly, it was closed in Jan 89 and removed in FY91, with non-IRP funds. The tank was found to be in good condition, but soil contamination with petroleum hydrocarbons was detected in soil around the tank. No mercury compounds were detected in the soil. Samples of residual oil from the inside of the tank were taken, but no mercury was detected. All known contaminated soil was removed under contract with the Corps of Engineers in May 1991.

Some of the soil in this area was also removed as part of the IRA for NRDEC-15.

Groundwater sampling close to this site has shown no contamination.

STATUS

RRSE RATING:

Low

CONTAMINANTS:

POL

MEDIA OF CONCERN:

Soil

COMPLETED IRP PHASE:

PA

CURRENT IRP PHASE:

SI

FUTURE IRP PHASE:

RC

PROPOSED PLAN

A draft closure document has been produced recommending no further sampling be conducted and will be submitted to the regulators in spring 2004.

T-25 BULK HAZARDOUS WASTE STORAGE AREA

SITE DESCRIPTION

This area is immediately south and extending southwest of Building T-25. Building T-25 was used for unheated storage of bulk waste, petroleum, solvents, antifreeze, and freon 113 in drums from 1970 until ~1984 when all material was removed from the area. Leakage occurred onto the pavement causing degradation. During excavation, examination of the underlying gravel showed no obvious contamination staining. Additionally, this site was identified within EPA's Hazard Ranking Score.

Since both NRDEC-05 and 07 represent contamination from the T-25 area, funds for groundwater contamination are listed under NRDEC-05 and funds for sediment contamination are listed under NRDEC-07.

A soil-gas study was performed in and around the surrounding area during 1989, yielding relative soil/gas results for BTEX, freon 11, freon 113, TCA, TCE, and PCE. Most of the hits were not in the immediate vicinity where the drums were stored, but further west.

Groundwater contamination has been detected off-post and is in the same aquifer that is used for the municipal water supply. This GW is within the capture zone of a municipal drinking water well field. This limits options for the application of remediation technologies. A pump and treat system was installed in 1998, to control the movement and reduce detection levels of the plume.

The treatment system is proving effective for reducing concentration at the source area and limiting contaminant migration. For example: in the past, one monitoring well in the T-25 Area, MW-15, had TCE detected at a range of 250 – 950 ppb. Currently, TCE levels have dropped to non-detect at MW-15B. As of FY04, contaminant levels have generally been reduced by ~80 percent, but are still above MCLs.

Both a cooperative agreement (CA) and a final T-25 Groundwater record of decision (ROD) were signed in September 2001.

The ROD requires the Army to maintain the on-post treatment system, monitor the groundwater and establish institutional controls. The CA provided authority for the Army to compensate the town of Natick (in a lump-sum payment - \$3.1M) for a portion of the cost of the off-post operation and maintenance of the municipal water treatment system and for establishing and maintaining institutional controls north of the installation.

Three production wells and four monitoring wells were installed in FY03. In FY04, a long-term monitoring plan and an operations plan were finalized. To date, this on-post facility has processed over 130 million gallons of water.

STATUS

RRSE RATING:

High

CONTAMINANTS:

Solvents

MEDIA OF CONCERN:

Groundwater

COMPLETED IRP PHASE:

PA/SI, RI/FS, RA(C)

CURRENT IRP PHASE:

RA(O)

FUTURE IRP PHASE:

RA(O), LTM

PROPOSED PLAN

Continue to monitor and operate the pump and treatment system to ensure proper containment of contaminated groundwater to the vicinity of the facility. It is anticipated as a result of the 5-year review in FY06, that additional off-post wells will be connected to the extraction system for optimization purposes. Currently, the model predicts 12 years of active pumping followed by 15 years of monitored natural attenuation in order to reach the cleanup goals. Once cleanup goals are reached, 5 years of monitoring are required.

FORMER PROPOSED GYMNASIUM SITE

SITE DESCRIPTION

This site is a 1.6-acre area situated on a filled-in marsh, located in the eastern portion of the installation, between the main entrance gate and Lake Cochituate. A helicopter landing pad was operated for a short time in the early 1970s on what is now a paved parking lot located to the west of the study area. The storage of empty POL bladders has also been reported at this location. In the late 1980s, this area was a proposed site for a new gymnasium. Soil borings performed as part of the geotechnical work emitted an odor thought by the workers to be benzene. With soil analysis detecting 1,4-dichlorobenzene at 3 ppm, the construction was subsequently canceled. Presently, there is a French Drain located in the western portion of the site which drains surface water directly into the lake. This site was identified within EPA's Hazard Ranking Score for Natick. Formerly, spring rain had backed-up the state sewer system and overflow from same runs into the lawn area and French Drain.

From two Petrex soil-gas surveys of the area BTEX, freon 11, freon 113, TCA, TCE, and PCE all occurred with low to moderate ion counts in small to large anomalies throughout the site. BTEX occurred in the largest anomalies. Soil borings yielded positive detections of organics (1,4-dichlorobenzene, BTEX, and freon). Groundwater samples analyzed indicate three volatiles above or close to the MCLs, {i.e., benzene (43.6-120 ug/L), chlorobenzene (26.9-96.2 ug/L), and 1,2 DCE (40ug/L)}.

An interim removal action of ~800 cy of contaminated soil was completed August 2002. Current groundwater concentrations have been reduced significantly, but are still above MCLs. An additional down gradient well was installed and sampled in January 2004. The levels of all contaminants have recently been observed below MCLs.

STATUS

RRSE RATING:

High

CONTAMINANTS:

Chlorinated Solvents, Metals, POL

MEDIA OF CONCERN:

Soil, Groundwater

COMPLETED IRP PHASE:

PA, IRA

CURRENT IRP PHASE:

RI/FS

FUTURE IRP PHASE:

RI/FS

PROPOSED PLAN

After two years of GW confirmatory sampling, a final RI and ROD will be prepared. This ROD will encompass other sites with no further action planned (NRDEC-03,06,13,14).

TRANSITORY SHELTER AREA OF T-25

SITE DESCRIPTION

The area immediately south and extending southwest of Building T-25. The area was used for outside storage of bulk waste, petroleum, solvents, antifreeze, and freon 113 in drums from 1970 until 1989 when all material was removed from the area. Leakage occurred onto the pavement causing degradation. During excavation, examination of the underlying gravel showed no obvious contamination staining. This site was identified within EPA's Hazard Ranking Score (50).

Since both NRDEC-05 and 07 represent contamination from the T-25 area, funds for groundwater contamination are listed under NRDEC-05 and funds for sediment contamination are listed under NRDEC-07. NRDEC-07 is located in Lake Cochituate, part of a state park.

Sediments in the T-25 outfall area are contaminated with pesticides and PAHs. The deposit sediment plume extends from 50 ft. to ~250 ft. from shore and ~100 ft wide. In 1997, an oil/water separator was installed to reduce the potential for future release from the outfall (non-IRP funds).

A screening level assessment indicated no risk to human health from exposure to sediments and surface water. In general, the state Department of Public Health, based on previous sampling, has placed an advisory recommending limitations (sensitive populations - American eel and large-mouth bass) on fish consumption only. The Tier II (2000) study found ecological risk. The Tier III study examined fish tissue for contamination. The final Tier III study issued in FY04 confirmed Tier II results.

Sediment contamination in Lake Cochituate is now being managed together with NRDEC-10 and -17 as one operable unit.

STATUS

RRSE RATING:

High

CONTAMINANTS:

Pesticides, PAHs

MEDIA OF CONCERN:

Soil, Sediments

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:

RI/FS (funded)

FUTURE IRP PHASE:

RD, RA(C)

PROPOSED PLAN

Complete RI/FS to include a food chain study and human health risk assessment for fish consumption. Remedial action is anticipated.

NRDEC-09

BLDG 14 POL HAZARDOUS SITE

SITE DESCRIPTION

The building is located in the southwest corner of the T-25 area, which encompasses Building 14 (51 x 134 feet). One of several dry wells was located along the southern end of the oil shed, which is in the northeastern corner of the building. There was a former fueling station located off the southeast corner of the building. A manhole cover off the southeast corner of the building indicates the location of the existing oil/water separator.

Former activities at Building 14 included insect and rodent control, vehicle maintenance, metal parts and brush cleaning, battery charging, silk screening, and thinning rubber adhesives. Vehicle and equipment maintenance have been the main activities in the building.

The 1,000-gallon oil/water separator was renovated in FY92. During excavation of the area in front of Building 14, evidence of soil contamination was found. Soil samples showed up to 6,000 ppm of hydrocarbons. In FY03, PAHs exceeding state standards were detected in groundwater and soil.

STATUS

RRSE RATING:
Medium

CONTAMINANTS:
POL, PAHs

MEDIA OF CONCERN:
Soil, Groundwater

COMPLETED IRP PHASE:
PA, SI

CURRENT IRP PHASE:
IRA

FUTURE IRP PHASE:
RI/FS, LTM

PROPOSED PLAN

Perform additional assessment, evaluate feasibility of an IRA and/or complete RI/FS. A limited soil removal and LTM may be required.

NRDEC-10

BLDG 5, PCB CONTAMINATION SITE AND PAD

SITE DESCRIPTION

In 1980, a transformer explosion spread PCB fluid on the pad and surrounding grass area. This source was remediated in May 1992 under contract by the Corps of Engineers with Environmental Compliance Achievement Program funds. Two transformers located on a 47 ft x 12.5 ft x 17 inch concrete substation pad enclosed by a fence near Building 5 (the Technology Center), were replaced by PCB-free units in 1990.

In 1998, sediments at the Main Outfall from SSC into Lake Cochituate were discovered to contain PCBs. This outfall drains from the area where the transformers were located at Building No.5. The deposit sediment plume is approximately 400 by 200 ft.

A screening level assessment indicated no risk to human health from exposure to sediments and surface water. In general, the state Department of Public Health, based on previous sampling, has placed an advisory recommending limitations (sensitive populations - American eel and large-mouth bass) on fish consumption only. The Tier II (2000) study found ecological risk. The Tier III study examined fish tissue for contamination. The final Tier III study issued in FY04 confirmed Tier II results.

Sediment contamination in Lake Cochituate is now being managed together with NRDEC-7 and -17 as one operable unit.

STATUS

RRSE RATING:

High

CONTAMINANTS:

PCBs, PAHs

MEDIA OF CONCERN:

Lakewater Sediment

COMPLETED IRP PHASE:

PA/SI, IRA

CURRENT IRP PHASE:

RI/FS (funded)

FUTURE IRP PHASE:

RD, RA

PROPOSED PLAN

Complete RI/FS to include a food chain study and human health risk assessment for fish consumption. Remedial action is anticipated.

NRDEC-11

POST DRINKING WATER WELLS

SITE DESCRIPTION

This site consists of two approximately 50 feet deep supply wells located on a peninsula on the south end of the post, exiting out into Lake Cochituate. Two 300 gallon per minute submersible pumps supplied well water to Building No. 63 (Pump House). At Building No. 63, water was chlorinated within a wet well and was pumped into the distribution system for public consumption at a rate of approximately 100,000 gallons per day. SSC decommissioned the system in 1995 and is currently using the town of Natick water supply.

Contaminants detected at the drinking water wells are TCE, PCE and DCE, all levels are below MCLs.

During the investigation, a second TCE groundwater plume was found that is believed to be coming from Building 2 and 45, extending to the lake. Levels in this plume were up to 150 ppb. Building 2 was constructed between 1952 and 1955 to conduct performance testing in arctic and tropical climates of food, clothing, equipment, and human response to temperatures, weather, and work conditions.

TCE and freon 11 were used within closed systems of the building for climate control.

There are no records of past spills of TCE at Building 2. In 1994, the Army discontinued the use of TCE and freon 11, and 2,776 gallons of TCE were removed from the Building 2 climate control system.

In fall 2003, the Army installed ten additional monitoring wells southeast and southwest of Bldgs 2 and 45 to delineate the plume.

STATUS

RRSE RATING:

Low

CONTAMINANTS:

Chlorinated Solvents

MEDIA OF CONCERN:

Groundwater

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:

RI/FS, IRA (use of town water)

FUTURE IRP PHASE:

RD, RA, RA(O)

PROPOSED PLAN

A RI/FS will be completed for the second plume, with particular emphasis on source location. Assuming a well defined source is located, limited in situ treatment or a small pump and treat system will be a likely remedy.

NRDEC-12

BUILDING 13 CLASSIFIED INCINERATOR

SITE DESCRIPTION

The building (11 x 15 ft) housed an incinerator used for destroying classified paperwork. This site has not been used since 1985. Asbestos pipe insulation was removed by the Corps of Engineers in 1990. The structure and incinerator were removed in 1997. The ash was disposed of under a RCRA manifest. The building foundation is still in place.

Building 13 also had a car wash rack and a sanitary sewage ejector tank. In front of the building, a pad was formerly used for mixing pesticides and degreasing.

Pesticides and PAHs were detected in surficial soil above state standards. In FY04, further examination of the incinerator feed stream will have been completed.

STATUS

RRSE RATING:

Low

CONTAMINANTS: Pesticides,
PAHs

MEDIA OF CONCERN:

Soil

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:

RI/FS, IRA

FUTURE IRP PHASE:

RI/FS

PROPOSED PLAN

Evaluate feasibility of an IRA and/or complete RI/FS. A limited soil removal may be required.

NRDEC-14

BOILER PLANT AREA (BUILDING 19)

SITE DESCRIPTION

This site consists of a blow down tank and associated former leaching field connected to Building 19, Boiler Basement floor drains. Building 19 housed a former pesticide mixing area in the basement that might have been connected to leach field. This site also housed a transformer vault.

In FY01, the leach field soil was removed as part of the IRA and a closure report was completed. In FY04, confirmatory GW samples were collected.

PROPOSED PLAN

The SI report will be completed.

STATUS

RRSE RATING:

Low

CONTAMINANTS:

POL, Pesticides, PCBs

MEDIA OF CONCERN:

Soil, Groundwater, Sediments

COMPLETED IRP PHASE:

PA, IRA

CURRENT IRP PHASE:

SI

FUTURE IRP PHASE:

SI

SITE DESCRIPTION

During the SI of the Boiler Plant, a PCE groundwater plume was discovered associated with Building 22. Building 22 was the former Hazardous Materials Issue Building from the 1950s to 1989.

A RI was started in FY00 to delineate the contamination. Soil and sediment samples in the area also show PCE contamination. The plume now extends from Bldg 36 to Bldg 22 and discharges into the lake sediments on both sides of the peninsula. Diffusion samplers indicate the presence of PCE in sediment. Groundwater sampling results indicate up to 600 ppb of PCE.

PROPOSED PLAN

Complete the RI/FS. It is likely that groundwater from this area will be extracted and directed to the existing T-25 pump and treat system.

STATUS

RRSE RATING:

Medium

CONTAMINANTS:

PCE

MEDIA OF CONCERN:

Soil, Sediment, Groundwater

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:

RI/FS (funded)

FUTURE IRP PHASE:

RD, RA, RA(O), LTM

BUILDING NO. 2 & 45, PARKING LOT OUTFALL

SITE DESCRIPTION

The stormwater outfall immediately south of Buildings 2 & 45 receives parking lot runoff and discharges into Lake Cochituate. The contaminated sediment is located in Lake Cochituate State Park.

The deposit sediment plume extends from 50 ft to approximately 100 ft from shore. In 1997, an oil/water separator was installed to reduce the potential for future release from the outfall (non-IRP funds).

A screening level assessment indicated no risk to human health from exposure to sediments and surface water. In general, the state Department of Public Health, based on previous sampling, has placed an advisory recommending limitations (sensitive populations - American eel and large-mouth bass) on fish consumption only. The Tier II (2000) study found ecological risk. The Tier III study examined fish tissue for contamination. The final Tier III study issued in FY04 confirmed Tier II results.

Sediment contamination in Lake Cochituate is now being managed together with NRDEC-7 and -10 as one operable unit.

STATUS

RRSE RATING:

High

CONTAMINANTS:

PCBs, PAH

MEDIA OF CONCERN:

Soil, Sediment

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:

RI/FS (funded)

FUTURE IRP PHASE:

RD, RA

PROPOSED PLAN

Complete RI/FS to include a food chain study and human health risk assessment for fish consumption. Remedial action is anticipated.

AREAS OF CONCERN

SITE DESCRIPTION

Sewer Line

The main sewer line for the installation runs along Kansas St. and empties into the Natick sewer system. The sewer pipe is made out of iron and verified clay. In a video taken of the main sewer line, there appeared to be no major cracks or broken pipes, only a few misalignments. The concern of this area to regulators is in the potential contamination due to permitted hazardous materials being introduced into the sewer system from activities being conducted in buildings on post. In the future, contamination in the sewer line will be traced to the source and dealt with under the source site.

Test Drop Area

The test drop area is located in the warehouse area and is used to test the strength of objects being dropped from various heights. The area is of concern to regulators is due to it being located on a rainwater leaching field with storm drains, although the leach basin was only installed in the late 1980s. Contamination could have occurred from testing in the drop area or on the pavement near the leaching field. No investigation of the area has occurred.

Soldier Systems Center

Massachusetts

ER,A RESPONSE COMPLETE SITES

NRDEC-01 BUILDING 42, WASTE INCINERATOR

SITE DESCRIPTION

This site is not in AEDB-R.

A small waste incinerator has been located in room 318 of Building 42, USARIEM. The original incinerator (installed in the 1970s) was used to burn pathological and other medical waste. The old incinerator was replaced with a new one in 1990. This incinerator was replaced with funds from USARIEM. The new one is currently permitted under permit number MBR-87-INC-002 issued in April 23, 1990. The current pathological waste incinerator was inspected by MDEP in April 1998.

This site is an operating facility and therefore not eligible for IRP funds.

STATUS

RRSE RATING:

Not Rated

CONTAMINANTS:

None

MEDIA OF CONCERN:

Soil, Groundwater

COMPLETED IRP PHASE:

REM

CURRENT IRP PHASE:

RC

NRDEC-02 BUILDING 30, INCINERATOR

SITE DESCRIPTION

In 1973, a small prefabricated incinerator manufactured by Jarvis, Inc, was installed in one corner of room number 108, used as an utility room within Building 30, the Health Clinic. The room is approximately 11 x 26 feet. Natural gas is used as fuel to maintain a 2,000 degree Fahrenheit furnace.

Before 1981, the incinerator was used to incinerate animal remains. From 1981 to 1987, the Safety Department used the unit for disposal of solvent-based scintillating fluids (e.g., toluene and xylene.) But since 1987, when the solvent-based scintillation fluid was substituted with the water-based fluids, the unit was infrequently used for disposal of paper-containing wastes. Residues generated have been disposed. Interior surface samples were taken, analyzed, and results found to be negative. Ash samples were found to be contaminated with lead. This incinerator was taken out of service in 1992 and demolished in FY94 under a renovation project. The ash was removed and disposed of in compliance with RCRA.

This site does not require any further action.

STATUS

RRSE RATING:

NE

CONTAMINANTS:

Solvents, Organics

MEDIA OF CONCERN:

Structure/internal surface

COMPLETED PHASE:

IRA, PA, RA

CURRENT PHASE:

RC-1994

NRDEC-08

LIQUID NITROGEN TANKS

SITE DESCRIPTION

Two above ground tanks used to store liquid nitrogen for use in Building 36 were no longer needed. The New York and New England Corps of Engineers removed the tanks in May 1993. There was an erroneous concern that ammonia had been stored in the tanks. Tests performed on the tanks for lead paint and asbestos were negative.

No further action is planned for this site.

STATUS

RRSE RATING:

NE

CONTAMINANTS:

Building Debris

MEDIA OF CONCERN:

Soil

COMPLETED IRP PHASE:

PA, RA

CURRENT IRP PHASE:

RC - 1993

NRDEC-13

PAH CONTAMINATION

SITE DESCRIPTION

During the T-25 investigation, PAH contaminated soil was found (in one soil sample) of Building T-68, near the walkway to the building. The area is considered to be small since most of the area is paved. Building T-68 was used for hazardous waste storage.

This site will be listed as RC in AEDB-R and any future actions will be funded under NRDEC-03.

STATUS

RRSE RATING:

Medium

CONTAMINANTS:

PAH, Non-chlorinated Solvents

MEDIA OF CONCERN:

Soil

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:

RC - 2004

NRDEC-15

CHLORDANE CONTAMINATION

SITE DESCRIPTION

Results from soil sampling near T-27 indicated that pesticide was spilled.

Contaminated soil (~1,000 cy) was removed and confirmatory samples were taken to confirm cleanup.

No further action is required.

STATUS

RRSE RATING:

Medium

CONTAMINANTS:

Pesticides, Chlordane

MEDIA OF CONCERN:

Soil

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:

RC - 1999

PAST MILESTONES

| | |
|---|----------------|
| IRP Preliminary Installation Assessment | May 1980 |
| Post Expanded Site Investigation | March 1991 |
| SI Pit Area Waste Oil Tank | May 1991 |
| Post Expanded Site Investigation Addendum | January 1992 |
| RA Bldg 5 PCB Contamination | May 1992 |
| RA Tanks Liquid Nitrogen | October 1992 |
| Master Environmental Plan | January 1993 |
| IRA Bldg 30 Incinerator | September 1993 |
| Phase 1 RI/FS T-25 Site | June 1996 |
| Groundwater Model Phase I | June 1997 |
| RA Chlordane Cont. | December 1997 |
| Phase 2 RI/FS T-25 Site | December 1998 |
| Draft RI/FS Former Gymnasium Site | December 1998 |
| Final T-25 Focused Feasibility Study | September 1999 |
| Draft Water Supply Well R/I | March 1999 |
| Record of Decision T25 Groundwater | September 2001 |
| IRA Boiler Plant | September 2001 |
| IRA NRDEC-06, soil removal | |

FUTURE MILESTONES

| | |
|---|--------|
| NRDEC-06, Remedial Investigation Report | FY2006 |
| NRDEC-07, 10, 17, RI Report (Tier III) | FY2005 |
| NRDEC-09, 12 Remedial Investigation | FY2005 |
| NRDEC-11, Remedial Investigation | FY2005 |
| NRDEC-13, Soil Removal | FY2005 |
| NRDEC-16, Remedial Investigation Report | FY2003 |
| Remedies In Place | FY2010 |
| Completion of IRP | FY2030 |

NO FURTHER ACTION SITES

| | | |
|----------|--|------|
| NRDEC-01 | Waste Incinerator, Building 42 (not in AEDB-R) | |
| NRDCE-02 | Building 30 Incinerator | 1994 |
| NRDEC-08 | Tanks Liquid Nitrogen | 1993 |
| NFDEC-13 | PAH Contamination | 2004 |
| NRDEC-15 | Chlordane Contamination | 1999 |

Schedule

| Phase: | Start | End | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011+ |
|----------------|--------|--------|------|------|------|------|------|------|-------|
| NRDEC-03 RI/FS | 200309 | 200609 | | | | | | | |
| NRDEC-03 IRA | 200502 | 200509 | | | | | | | |
| NRDEC-05 RA(O) | 200009 | 202901 | | | | | | | |
| NRDEC-05 LTM | 202901 | 203401 | | | | | | | |
| NRDEC-06 RI/FS | 199608 | 200609 | | | | | | | |
| NRDEC-07 RI/FS | 199209 | 200511 | | | | | | | |
| NRDEC-07 RD | 200512 | 200609 | | | | | | | |
| NRDEC-07 RA(C) | 200610 | 200709 | | | | | | | |
| NRDEC-09 RI/FS | 200409 | 200810 | | | | | | | |
| NRDEC-09 IRA | 200504 | 200609 | | | | | | | |
| NRDEC-10 RI/FS | 199209 | 200511 | | | | | | | |
| NRDEC-10 RD | 200512 | 200609 | | | | | | | |
| NRDEC-10 RA(C) | 200610 | 200709 | | | | | | | |
| NRDEC-11 RI/FS | 199804 | 200506 | | | | | | | |
| NRDEC-11 RD | 200506 | 200606 | | | | | | | |
| NRDEC-11 RA(C) | 200901 | 200909 | | | | | | | |
| NRDEC-11 RA(O) | 200909 | 201509 | | | | | | | |
| NRDEC-12 RI/FS | 200109 | 200810 | | | | | | | |
| NRDEC-12 IRA | 199807 | 200609 | | | | | | | |
| NRDEC-13 IRA | 200502 | 200509 | | | | | | | |
| NRDEC-14 SI | 199804 | 200609 | | | | | | | |
| NRDEC-16 RI/FS | 200009 | 200504 | | | | | | | |
| NRDEC-16 RD | 200505 | 200512 | | | | | | | |
| NRDEC-16 RA(C) | 200512 | 200610 | | | | | | | |
| NRDEC-16 RA(O) | 200611 | 202112 | | | | | | | |
| NRDEC-16 LTM | 201610 | 201810 | | | | | | | |
| NRDEC-17 RI/FS | 199209 | 200511 | | | | | | | |
| NRDEC-17 RD | 200512 | 200609 | | | | | | | |
| NRDEC-17 RA(C) | 200610 | 200709 | | | | | | | |

Remediation Activities

COMPLETED REM/IRA/RA:

- NRDEC-04, Pit Area Waste Oil Tank, Tank and Soil Removed, 1991,
- NRDEC-08, Tanks Liquid Nitrogen, Removed, May 1993
- NRDEC-02, Bldg. 30 Incinerator, Ash Removal, Oct. 93-Feb 94
- NRDEC-15, Chlordane Contamination, RI/FS & Soil removal, FY96-FY97
- NRDEC-14, Boiler Plant IRA Soil Removal, FY01
- NRDEC-06: Soil Removal IRA FY02

CURRENT REM/IRA/RA:

- NRDEC-05, T-25 groundwater pump and treat system
Started 1997 - ongoing.

FUTURE REM/IRA/RA:

- NRDEC-03, T-62 &T-68, Clean building interior
- NRDEC-12, Incinerator, soil removal
- NRDEC-13, Soil removal outside T-62 & T-68
- NRDEC-07, 10, 17 Sediment Action
- NRDEC-11, Possible in situ treatment
- NRDEC-16, Building 22/36, groundwater treatment

RESTORATION ADVISORY BOARD (RAB) STATUS

The U.S. Army Soldier Systems Center (SSC) established a Restoration Advisory Board (RAB) in 1995 to bring local citizens into the decision making process on environmental issues. The Board consists of representatives from the Army, Environmental Protection Agency, Massachusetts Department of Environmental Protection, Massachusetts Department of Environmental Management, SSC employee representatives, and community members. The community members were chosen to represent different groups within the town of Natick (i.e. Lakewood Neighborhood Association [received TAG], Lake Cochituate State Park, Lake Cochituate Advisory Committee) and act as information liaisons between the community and the U.S. Army. The Lakewood Association was awarded a Technical Assistance Grant (TAG) to help better understand technical information involved with restoration activities. As an advisory committee, the RAB reviews environmental documents and plans, helps prioritize budget expenditures, provides advice to the U.S. Army, and communicates information back to the community. The RAB has met monthly since August 1995.